INTERNATIONAL CYANIDE MANAGEMENT INSTITUTE

Cyanide Transportation
Summary Audit Report

For The
International Cyanide Management Code and
INOVAR Transportes & Logística Ltda./Brazil

www.cyanidecode.org

November 2011

The International Cyanide Management Code (hereinafter "the Code"), this document, and other documents or information sources referenced at www.cyanidecode.org are believed to be reliable and were prepared in good faith from information reasonably available to the drafters. However, no guarantee is made as to the accuracy or completeness of any of these other documents or information sources. No guarantee is made in connection with the application of the Code, the additional documents available or the referenced materials to prevent hazards, accidents, incidents, or injury to employees and/or members of the public at any specific site where gold is extracted from ore by the cyanidation process. Compliance with this Code is not intended to and does not replace, contravene or otherwise alter the requirements of any specific national, state or local governmental statutes, laws, regulations, ordinances, or other requirements regarding the matters included herein. Compliance with this Code is entirely voluntary and is neither intended nor does it create, establish, or recognize any legally enforceable obligations or rights on the part of its signatories, supporters or any other parties.
SUMMARY AUDIT REPORT
FOR CYANIDE TRANSPORTATION OPERATIONS

Instructions

1. The basis for the finding and/or statement of deficiencies for each Transport Practice should be summarized in this Summary Audit Report. This should be done in a few sentences or a paragraph.

2. The name of the cyanide transportation operation, lead auditor signature and date of the audit must be inserted on the bottom of each page of this Summary Audit Report.

3. An operation undergoing a Code Verification Audit that is in substantial compliance must submit a Corrective Action Plan with the Summary Audit Report.

4. The Summary Audit Report and Corrective Action Plan, if appropriate, for a cyanide transportation operation undergoing a Code Verification Audit with all required signatures must be submitted in hard copy to:

   International Cyanide Management Institute (ICMI)
   888 16th Street, NW, Suite 303
   Washington, DC 20006, USA

5. The submittal must be accompanied by 1) a letter from the owner or authorized representative which grants the ICMI permission to post the Summary Audit Report and Corrective Action Plan, if necessary, on the Code Website, and 2) a completed Auditor Credentials Form. The lead auditor’s signature on the Auditor Credentials Form must be certified by notarization or equivalent.

6. Action will not be taken on certification based on the Summary Audit Report until the application form for a Code signatory and the required fees are received by ICMI from the applicable cyanide transportation company.

7. The description of the cyanide transport company should include sufficient information to describe the scope and complexity of its operation.
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Name of Cyanide Transportation Facility: INOVAR Transportes & Logística Ltda.
Name of Facility Owner: Turazzi Transportes Ltda.
Name of Facility Operator: INOVAR Transportes & Logística Ltda.
Name of Responsible Manager: Irineu Carlos Turazzi
Address: Avenida Fernando Correia da Costa, 7666. (Cuiabá)
State/Province: Mato Grosso do Sul
Country: Brazil
Telephone: (55+65) 3665-3333
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E-Mail: carlinhos@inovartransportes.com.br

Location detail and description of operation:

The INOVAR operation is focused on the road transportation of cyanide for gold mining operations, without interim storage. The operation is located at Cuiabá town (Mato Grosso do Sul State, middle west of Brazil) and transports solid cyanide from the Port of Santos (São Paulo State) to a gold mine operation located at the Mato Grosso State, (middle west of Brazil). The operation has a SHEQ management system certified in accordance to SASSMAQ protocol, established by the Brazilian Chemical Industry Association. The operation trucks, specifically designed and bought to transport cyanide containers, are remotely monitored (100% during the travel between the port and the final client) and equipped with on board computer. The operation drivers are qualified, based on the Brazilian legislation, to transport hazardous chemical products and also were trained by the cyanide producer. This audit covered two days of the cyanide transportation activity (loading at Santos Port and unloading at the mine operation).
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Auditor’s Finding

This operation is

X in full compliance
☐ in substantial compliance *(see below)
☐ not in compliance

with the International Cyanide Management Code.

* For cyanide transportation operations seeking Code certification, the Corrective Action Plan to bring an operation in substantial compliance into full compliance must be enclosed with this Summary Audit Report. The plan must be fully implemented within one year of the date of this audit.

Audit Company: NOSA Certification Authority Brasil Ltd.
Audit Team Leader: Celso Sandt Pessoa (ICMI qualified lead auditor and transportation qualified TEA (technical expert auditor)).
E-mail: celsopessoa@ncabrasil.com.br
Names and Signatures of Other Auditors: not applicable
Date(s) of Audit: 27/07/2011 (on-site/loading), 02/08/2011 (on-site/unloading), 22 ~ 24/08/2011 (on-site) and 03 & 04/11/2011 (off-site).

I attest that I meet the criteria for knowledge, experience and conflict of interest for Code Verification Audit Team Leader, established by the International Cyanide Management Institute and that all members of the audit team meet the applicable criteria established by the International Cyanide Management Institute for Code Verification Auditors.

I attest that this Summary Audit Report accurately describes the findings of the verification audit. I further attest that the verification audit was conducted in a professional manner in accordance with the International Cyanide Management Code Verification Protocol for Cyanide Transportation Operations and using standard and accepted practices for health, safety and environmental audits.

[Signature]

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1. TRANSPORT: Transport cyanide in a manner that minimizes the potential for accidents and releases.

Transport Practice 1.1: Select cyanide transport routes to minimize the potential for accidents and releases.

X in full compliance with
The operation is in substantial compliance with Transport Practice 1.1 not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:
The operation did design and implement a procedure to identify and select appropriate and safer routes to transport the cyanide from the port of entrance until the mining operation. Evidenced that the operation selected two possible routes (one principal and one alternate) between the port and the mine. Evidenced that the selection of route process considered the population density along the route, the infrastructure (asphalt, double or single roadway, gas stations, policy stations, emergency stations, communication, shadow areas for communication), the condition of the route (under maintenance, holes, without asphalt), weather conditions (such as fog, fire, rain) and surface waters (rivers, creeks, lakes). Records of selected routes were reviewed. Most of the routes are asphalted and only the last 35 Km (way to the mine) are not asphalted. In this last part, the truck is escorted by a vehicle from the mine.

All the risks related to the selected routes were identified by the operation and clearly identified in the route record (traveling plan). Several controls such as speed limit, driver qualification and training, truck maintenance, pre-traveling brief with the driver, planned transport observations, full time monitoring of the truck from a remote station, limited traveling time, were implemented by the operation in order to mitigate the risks related to the selected routes.

The operation constantly evaluates the condition of the selected routes. In the end of each travel, the driver records, on the traveling plan, his perceptions and findings about the route condition. This travel report is reviewed by the operations officer and, when necessary, the route plan is updated and the risks re-evaluated.

The operation prepares, before each travel, the traveling plan (which is delivered to the driver and a briefing is performed), identifying all the risks and related controls that shall be observed by the driver, including allowed stations to stop, shadow zones for phone signal, speed limit, severe down hills, bridges, rivers, among other aspects.

The operation always contact the Brazilian Federal Road Policy, the tracking contractor, the road administration contact, in order to define the route and avoid potential problems along the selected route. The operation will use escorts when the risk analysis indicates that this should be a control during the transport (safety and security). In the selected routes, it was identified that an escort vehicle is only required in the last 35Km of the route, when the truck is escorted by a mine vehicle. Depending on the amount of the cyanide being transported, the operation transports the cargo in convoys. The operation communicated the Brazilian Federal Road Policy, the road administration authorities, the insurance company (Pamcary) and the emergency responders (Suatrans) their roles in an emergency situation involving the cyanide transportation.
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**Transport Practice 1.2:** Ensure that personnel operating cyanide handling and transport equipment can perform their jobs with minimum risk to communities and the environment.

- X in full compliance with
- The operation is in substantial compliance with Transport Practice 1.2
- not in compliance with

*Summarize the basis for this Finding/Deficiencies Identified:*
The operation use only qualified drivers (in accordance to Brazilian legislation) to transport chemical products, including NaCN. The driver must have a specific driving license type “E”. Beyond this legal requirement, the operation established health requirements to the drivers, psychological evaluation, education requirements and experience. The operation also requires specific training for its drivers, including MOPP training (Movimento Operacional de Produtos Perigosos/ dangerous products operational movement) and provides annual refresh training, including first aid and emergency procedures related to cyanide and driver’s operation manual. The operation nominated one of its qualified driver as the “master driver” and responsible to transport the cyanide cargo. There are another four qualified drivers, beyond the master driver. Reviewed the driver’s permits, the MOPP training records, the occupational health certificate, the psychological evaluation, the drug and alcohol evaluation, the route risk evaluation record and the annual refresh trainings performed in 2011. Also evidenced that the cyanide producer delivered specific trainings related to cyanide the operation team.

**Transport Practice 1.3:** Ensure that transport equipment is suitable for the cyanide shipment.

- X in full compliance with
- The operation is in substantial compliance with Transport Practice 1.3
- not in compliance with

*Summarize the basis for this Finding/Deficiencies Identified:*
The operation uses a Scania (model 2011) truck specifically designed to transport containers up to 54 ton (flat platform truck, with pin lockers). Truck licenses were reviewed. According to the Brazilian legislation all trucks used to transport chemical products shall be inspected by a public authority in order to be approved to transport such kind of products. Reviewed annual inspection records by the public authority (CIV). Before loading the cargo container, the driver reviews the transportation documentation in order to verify the cargo weight and confirm that the truck is capable to transport it. According to Brazilian transport legislation, there is a maximum load capacity allowed per truck to transit in the roads. There are controls points along the route to verify the cargo weight (weight stations) and the cargo documentation, by the public authorities.

**Transport Practice 1.4:** Develop and implement a safety program for transport of cyanide.

- X in full compliance with
- The operation is in substantial compliance with Transport Practice 1.4
- not in compliance with

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Summarize the basis for this Finding/Deficiencies Identified:

The producer cyanide boxes are transported in certified containers that are sealed after the loading activity at BrasilSantos terminal (Port of Santos). The container is unsealed when arrives at the mine operation. According to the Brazilian legislation, the truck shall have, in four sides, standard placards indicating the nature of the chemical product being transported. It was evidenced that the operation truck is fully identified. The operation designed and implemented a robust inspection program of the truck before each journey, including the inspection of the truck, the inspection of the emergency resources, the inspection of the communication and tracking system, the inspection of the tachograph, the verification of the driver and cargo documentation. The operation implemented a preventive maintenance program for its trucks in accordance with Scania (truck producer) requirements. The preventive maintenance is performed by a qualified Scania dealer. The operation defined a maximum driving time of 12 hours, including one hour for lunch and a 15’ rest every 4,5 hours of driving. The driver is not allowed to drive at night. The working hours is controlled through the remote tracking station.

The truck is specifically designed to transport containers and it has pin lockers, that are inspected by the driver before each journey, and prevent the containers from shifting.

In accordance to the operation safety policies and the driver’s operation manual, in the event of stormy or hard rain, wind conditions, ice rain, the transport activity shall be stopped or even not allowed to begin.

The operation designed and implement a drug & alcohol policy, accepted by all drivers, in which all the drivers before the beginning of a journey pass through an alcohol detection test and annually, during the occupational health monitoring program, the drivers pass through a drug detection test.

The operation defined and implemented a process to manage all records related to its activities. All requested records were promptly retrievable and are adequately maintained by the operation.

Transport Practice 1.5: Follow international standards for transportation of cyanide by sea and air.

The operation is

in full compliance with
in substantial compliance with
not in compliance with

Transport Practice 1.5

Summarize the basis for this Finding/Deficiencies Identified:

This transport practice is not applicable to the operation scope. The operation scope is road transportation.
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Transport Practice 1.6:  Track cyanide shipments to prevent losses during transport.

X in full compliance with
The operation is in substantial compliance with
not in compliance with
Transport Practice 1.6

Summarize the basis for this Finding/Deficiencies Identified: (Due to the sensitivity of security issues regarding storage of cyanide, no descriptions of substantial or non-compliance with this aspect of the Transport Practice should be provided).
The transport vehicle is provided with tracking systems (on board computer), using GPS signal.
The driver is also equipped with a fast dialing mobile phone (three lines).
The communication system is tested before each travel, and periodically checked during the trip.
The blackout areas for mobile phones were identified and mitigated with the aid of three different lines. The tracking system has no blackout areas. The truck is monitored 100% of the time, by a remote control station, by the operation headquarters and the tracker provider.
The operation implemented a chain of custody records management, according to the Brazilian law. The documentation is verified prior the transportation and before the unloading at the mine operation.
The transport documentation clearly identifies the amount of cyanide being transported and the product MSDS is part of this documentation.

2. INTERIM STORAGE:  Design, construct and operate cyanide trans-shipping depots and interim storage sites to prevent releases and exposures.

Transport Practice 2.1:  Store cyanide in a manner that minimizes the potential for accidental releases.

in full compliance with
The operation is in substantial compliance with
not in compliance with
Transport Practice 2.1

Summarize the basis for this Finding/Deficiencies Identified:*
This principle is not applicable to the operation scope because the cyanide cargo is transported straight from the Port to its final destination, the mining operation. During the transport, the truck is monitored 100% of the time and stops, at night, only at pre-evaluated and approved stations along the route. The tracking system also blocks (turn-off) the truck engine if something different from the planned script (travel plan) occurs.
Verified the tachograph records

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3. EMERGENCY RESPONSE: Protect communities and the environment through the development of emergency response strategies and capabilities

Transport Practice 3.1: Prepare detailed emergency response plans for potential cyanide releases.

X in full compliance with

The operation is in substantial compliance with Transport Practice 3.1
not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:
The operation defined and documented three different emergency plans. The first one, SSMA-NP-04-02 (01/06/2011), was developed by the operation SHE officer and is focused on emergency procedures that shall be observed by the truck driver and other involved stakeholders such as road policy, emergency rescuers, paramedic teams. It is based on the DuPont NaCN MSDS (11/2009). The second one was developed by the operation insurance company, Pamcary, in conjunction with an emergency rescuer, SOS Cotec. It is a general emergency plan. The third one, was developed by the operation in conjunction with an emergency respond expert, SUATRANS, and is specific for the cyanide transportation in the identified transportation routes. The SUATRANS specific emergency plan was first issued in August 2011 and revised and updated on October 2011, after the emergency drill performed in conjunction with the operation and other stakeholders, such as public authorities. The emergency plans are specific to the selected cyanide transportation routes (based on the risk evaluation performed on the selected routes) and specific for the transportation of solid cyanide. The emergency response plan is focused on the identified and evaluated risks, also considering the available infrastructure and resources available in the selected routes. The plan is specific for the truck configuration being used to transport the cyanide (flat platform truck, with pin lockers, specifically designed to transport metallic sea containers). The plan describes the specific response actions that shall be applied to each emergency situation, such as accident with fire, fall into surface waters, cyanide leakage on a rainy day, among other emergency scenarios. The plans describe the roles of several stakeholders that should be involved in the emergency response, such as road policy, emergency responders and rescuers, first aid stations along the route, reference hospitals, environmental authorities.

Transport Practice 3.2: Designate appropriate response personnel and commit necessary resources for emergency response.

X in full compliance with

The operation is in substantial compliance with Transport Practice 3.2
not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:
Was evidenced that the operation provided emergency training for drivers, emergency coordinators, emergency response members, including the support training provided by the cyanide producer and the emergency respond expert.
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The roles of each emergency responder are clearly defined and communicated. The operation defined the required emergency equipment that shall be available at the truck (emergency kit), such as face mask, O2 bottle, gloves, flashlight, signage, fire extinguishers (dry powder), rubber boots, safety helmet and glasses, overall Tyvec, antidotes, brush, cords, MgO powder and plastic blankets. The emergency kit is inspected before each travel.

Transport Practice 3.3: Develop procedures for internal and external emergency notification and reporting.

X in full compliance with
The operation is in substantial compliance with Transport Practice 3.3
not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:
The driver's operational manual and the emergency plans clearly address the emergency communication system, including contact information of all potentially involved stakeholders such as road policy, the cyanide producer, the cyanide buyer, hospitals, first aid stations along the route, environmental agencies, emergency responders, Brazilian chemical association. Emergency contact information are also available at the truck doors (stickers) and at the truck chassis (stickers also). This information is kept updated.

Transport Practice 3.4: Develop procedures for remediation of releases that recognize the additional hazards of cyanide treatment chemicals.

X in full compliance with
The operation is in substantial compliance with Transport Practice 3.4
not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:
The reviewed emergency plans clearly define the remediation procedures that shall be applied in the event of cyanide related emergencies, including the use of specific neutralizer (MgO) for solid cyanide spills in soil and the disposal of the neutralized media, first stored in plastic bags and then disposed adequately, in the mine operation. The reviewed plans clearly define that chemical products, such as sodium hypochlorite, ferrous sulfate and hydrogen peroxide, are prohibited to be used in the event of solid cyanide releases in surface waters along the route.

Transport Practice 3.5: Periodically evaluate response procedures and capabilities and revise them as needed.

X in full compliance with
The operation is in substantial compliance with Transport Practice 3.5
not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:
The operation annually reviews and revise (if necessary) its emergency plans (including the

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specific one, provided by SUATRANS). The operation also planned, on a yearly basis, several simulation activities related to their emergency plans, including one specific exercise in conjunction with the emergency responder expert, SUATRANS. The operation plans and implement mock emergency drills, related to its emergency plans and in conjunction with the emergency responders expert. Reviewed emergency drill plan for 2011 (in conjunction with SUATRANS). Reviewed also two emergency drills performed on July 2011 (performed by INOVAR emergency brigade team) and on September 2011 (performed in conjunction by INOVAR emergency brigade and SUATRANS emergency respond team, including the participation of external stakeholders, such as Brazilian Federal road policy, road administration rescue team, firefighters). After the emergency drills, the operation and SUATRANS review the drill result and, when applicable, the emergency plan is revised and updated. Evidenced that the SUATRANS emergency plan was revised and updated after the emergency drill performed on September 2011.